California Regional Water Quality Control Board
Santa Ana Region

Urban Runoff Monitoring and Reporting Program No. R8-2002-0011
NPDES No. CAS618033

for
Riverside County Flood Control and Water Conservation District,
The County of Riverside, and the Cities of Riverside County
within the Santa Ana Region
Area Wide Urban Runoff

I. GENERAL

A. Revisions of the Urban Runoff monitoring and reporting program are appropriate to ensure that the Permittees are in compliance with requirements and provisions contained in this Order. Revisions may be made under the direction of the Executive Officer at any time during the term of the Order, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

B. The Executive Officer is authorized to allow the Permittees to participate in statewide, national, or other monitoring programs in lieu of this Urban Runoff monitoring program.

C. All sample collection, handling, storage, and analysis shall be in accordance with test procedures under 40 CFR Part 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the USEPA, the guidance being developed by the State Board pursuant to Water Code Section 133383.5, or other methods which are more sensitive than those specified in 40 CFR 136 and approved by the Executive Officer.

D. The Permittees are authorized to complement their Urban Runoff monitoring data with data from other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana Watershed.

E. The Principal Permittee has been monitoring Urban Runoff and Receiving Waters since the first permit term. It is recognized that some of the objectives noted in Section II, below, may not have been attained during the previous permit terms. Ongoing long-term Urban Runoff monitoring will help to accomplish these objectives. The Regional Board authorizes the Executive Officer to evaluate and determine adequate progress toward meeting each objective.

F. This Order references three components of the Consolidated Monitoring Program (the “CMP”): (1) The existing CMP shall continue to be implemented until the revised CMP is approved; (2) The CMP will be reviewed and revised under this Order to identify data gaps and to attain the objectives specified in Section II, below and (3) Other regional monitoring efforts where the Permittees participate or contribute resources.

G. Pending approval of the revised CMP, current monitoring efforts will focus on areas with elevated pollutant concentrations. The Principal Permittee, in coordination with Regional Board staff, will identify these monitoring locations within six (6) months of adoption of this Order.

H. The Permittees shall develop and submit, within twelve (12) months of adoption of this Order a revised CMP for approval by the Executive Officer. The revised CMP should reflect an integrated watershed monitoring approach and be capable of attaining the objectives mentioned below. The development and implementation of the monitoring program shall be in accordance with any requirements developed by the State Board and the time schedules prescribed by the Executive Officer.

I. It is highly recommended that the Permittees cooperate, as appropriate, with other MS4 Permittees (including Orange County and San Bernardino County), the Southern California Coastal Water Research Project (SCCWRP), POTW operators, the dairy industry, the Santa Ana Watershed Project Authority (SAWPA), and other public and private organizations in the watershed to develop coordinated surface water quality monitoring programs, databases, and special studies.

II. OBJECTIVES

The overall goal of the Urban Runoff monitoring program is to support the development of an effective Urban Runoff management program. The following are the major objectives:

A. To identify those Receiving Waters, which, without additional action to control pollution from Urban Runoff that cannot reasonably be expected to achieve or maintain applicable water quality standards required to sustain the beneficial uses, the goals, and the objectives of the Basin Plan.

B. To develop and support an effective MS4 management program.

C. To identify significant water quality problems, related to discharges of Urban Runoff within the Permit Area.

D. To define water quality status, trends, and pollutants of concern associated with urban discharges and their impact on the beneficial uses of the Receiving Waters.

E. To analyze and interpret the collected data to determine the impact of Urban Runoff and/or validate any water quality models.

F. To characterize pollutants associated with Urban Runoff, and to assess the influence of urban land uses on Receiving Water quality and the beneficial uses of Receiving Waters.

G. Identify significant water quality problems related to urban storm water discharges.

H. To identify other sources of pollutants in storm water runoff to the maximum extent possible (e.g., including, but not limited to, atmospheric deposition, and contaminated sediments, other non-point sources, etc.)

I. To identify and prohibit illicit connections.

J. To identify and prohibit illicit discharges.

K. To verify and to identify sources of Urban Runoff pollutants.

L. To identify and prohibit illicit connections.

M. To verify and to control illegal discharges.

N. To evaluate the effectiveness of the DAMP and WQMPs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs implemented by the Permittees.

O. To conduct monitoring in cooperation with San Bernardino County for investigation of bacteriological impairments in the upper Santa Ana River due to Urban Runoff.

P. To evaluate the costs and benefits of proposed Urban Runoff management programs to protect Receiving Water quality.

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III. MONITORING PROGRAM REQUIREMENTS

A. TMDL/303(d) Listed Waterbody Monitoring: The Permittees should continue to participate in the TMDL and Southern California Cooperative Storm Water Research/Monitoring programs as they relate to Urban Runoff. In addition, strategies shall be revised/developed to evaluate the impacts of Urban Runoff on identified impairments within the Santa Ana River watershed and other tributary 303(d) listed waterbodies.

B. The Permittees shall revise their CMP, within twelve (12) months of adoption of this Order. The revised CMP shall consider, at a minimum and include, the following monitoring components or their equivalent:

1. Mass Emissions Monitoring:

   a. An estimate of flow in cubic feet per second (cfs) from the outfall/stream at the time of sampling.

   b. Monitor mass emissions in Urban Runoff to: (a) estimate the total mass emissions from the MS4 to Receiving Waters; (b) assess trends in mass emissions associated with Urban Runoff over time; and (c) to determine if Urban Runoff is contributing to exceedances of water quality objectives or beneficial uses in Receiving Waters by comparing results to the Basin Plan.

   c. Representative samples from the first storm event and two more storm events shall be collected during the rainy season. A minimum of three dry-weather samples shall also be collected. Samples from the first rain event each year shall be analyzed for the entire suite of priority pollutants. All samples must be analyzed for metals, pH, TSS, TOC, pesticides/herbicides, and constituents that are known to have contributed to impairment of local receiving waters. Dry weather samples should also include an analysis for oil and grease. Sediments associated with mass emissions should be analyzed for constituents of concern identified in the water analyses.

2. Microbial Monitoring: A monitoring program to determine the sources of bacteriological contamination in the Upper Santa Ana River, is being developed in collaboration with the MS4 Permittees in San Bernardino County. This program associated with Urban Runoff shall include wet and dry weather monitoring, as appropriate, for bacteriological constituents in the Santa Ana River and its tributaries.

3. Water Column Toxicity Monitoring: Analyses for toxicity to aquatic species shall be performed on Receiving Water samples to determine the impacts of Urban Runoff on toxicity of Receiving Waters. *Ceriodaphnia dubia* fertilization, Fathead Minnow larval survival test, and Selenastrum Capricornutum growth test shall be used to evaluate toxicity on the sample from the first rain event, plus one other wet weather sample. In addition, where applicable collect two dry weather samples or propose equivalent procedures in the CMP. In addition,

criteria shall be identified which will trigger the initiation of Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

4. Reconnaissance: The Permittees shall review and update their reconnaissance strategies to identify and prohibit illicit discharges. Where possible, the use of GIS to identify geographic areas with a high density of industries associated with gross pollution (e.g. electroplating industries, auto dismantlers) and/or locations subject to maximum sediment loss (e.g. new development) may be used to determine areas for intensive monitoring efforts. Additionally, the Permittees shall coordinate with the Regional Board to develop a comprehensive database to include enforcement actions for storm water violations and unauthorized, non-storm water discharges that can then be used to more effectively target reconnaissance efforts.

5. Land Use Correlations: The Permittees shall develop and implement strategies for determining the effects of urban land use on the quality of Receiving Waters. While it is recognized that a wide range of land uses exist across the region and within each sub-watershed, one relationship that may be determined is the impact of urban development on sediment loading within Receiving Waters, since developed areas contribute relatively little sediment loading compared to areas under construction. Consequently, the Permittees shall, at a minimum, analyze the impacts of increasing development and the conversion of agricultural land to urban land uses to the sediment loading of Canyon Lake, Lake Elsinore, and the Santa Ana River (Reaches 3 and 4).

6. Sources of Data: Where possible and applicable, data shall be obtained from monitoring efforts of other public or private agencies/entities (e.g., Caltrans).

7. Bioassessments: The development of an Index of Biological Integrity for Southern California. This shall include the selection and identification of appropriate bioassessment station locations, sampling scheme(s), and shall also be capable of attaining the objectives mentioned in Section II, above. The Permittees may develop bioassessments in coordination or cooperation with other parties as addressed in Section I.I., above.

C. Within twelve (12) months of adoption of this Order, the Permittees shall develop and submit for approval of the Executive Officer, their revised CMP, which should support the achievement of the above-stated goals. The implementation of the CMP shall be in accordance with the time schedules prescribed by the Executive Officer. At a minimum, the CMP shall address the following and any requirements developed by the State Board in accordance with Water Code Section 13383.5:

1. Uniform guidelines for quality control, quality assurance, data collection and data analysis.

2. A procedure for the collection, analysis, and interpretation of existing data from local, regional or national monitoring programs. These data sources may be utilized to characterize different sources of pollutants discharged to the MS4; to determine pollutant generation, transport and fate; to develop a relationship between land use, development size, storm size and the event mean

concentration of pollutants; to determine spatial and temporal variances in Urban Runoff quality and seasonal and other bias in the collected data; and to identify any unique features of the Permit Area. The Permittees are encouraged to use data from similar studies, if available.

3. A description of the CMP including:

   a. The number of monitoring stations;

   b. Monitoring locations within MS4s, major outfalls, and Receiving Waters; Environmental indicators (e.g., ecosystem, flow, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;

   c. Total number of samples to be collected from each station, frequency of sampling during wet and dry weather, short duration or long duration storm events, type of samples (grab, 24-hour composite, etc.), justification for composite versus discrete sampling, type of sampling equipment, quality assurance/quality control procedures followed during sampling and analysis, analysis protocols to be followed (including sample preparation and maximum reporting limits), and qualifications of laboratories performing analyses;

   d. A procedure for analyzing the collected data and interpreting the results including an evaluation of the effectiveness of the management practices, and need for any refinement of the WQMPs or the DAMP.

   e. Parameters selected for field screening and for laboratory work; and

   f. A description of the responsibilities of all the participants in this program, including cost sharing.

IV. REPORTING

A. All progress reports and proposed strategies and plans required by this Order shall be signed by the Principal Permittee, and copies shall be submitted to the Executive Officer under penalty of perjury.

B. The Permittees shall submit an Annual Report to the Executive Officer and to the Regional Administrator of the USEPA, Region 9, no later than November 30th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, the Annual Report shall include the following:

   1. A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this Order;

   2. An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the DAMP. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit connections/illegal discharges and reducing pollutant loads in Urban Runoff;

3. An assessment of any modifications to the WQMPs, or the DAMP made to comply with CWA requirements to reduce the discharge of pollutants to the MEP;

4. A summary, evaluation, and discussion of monitoring results from the previous year and any changes to the monitoring program for the following year;

5. A fiscal analysis progress report as described in Section XV, Provision B., of Order No. R8-2002-0011;

6. A draft work plan that describes the proposed implementation of the WQMPs and the DAMP for next fiscal year. The work plan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's actions for the next fiscal year;

7. Major changes in any previously submitted plans/policies; and

8. An assessment of the Permittees compliance status with the Receiving Water Limitations, Section III of the Order, including any proposed modifications to the WQMPs or the DAMP if the Receiving Water Limitations are not fully achieved.

C. The Co-Permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the Principal Permittee. A duly authorized representative of the Co-Permittee under penalty of perjury shall sign all such submittals.

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REPORTING SCHEDULE

All reports required by this Order shall be submitted to the Executive Officer in accordance with the following schedule:

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
I.A.2.a. & I.B.2.a.	Management Steering Committee meetings to discuss permit implementation	Held at least quarterly	Annually on Nov. 30th
I.A.2.b. & I.B. .2.b.	Permittee Technical Committee meetings to discuss permit implementation	Held at least 10 times each year	Annually on Nov. 30th
I.B.2.a. & XIII.D.	Co-Permittees Participate in Management and Technical Committee meetings to discuss permit implementation	Attend at least 3 out of 4 Management and 8 out of 10 Technical meetings each year	Annually on Nov. 30th
III.D.1.	Notify Regional Board if Section III.E. discharges from MS4s cause exceedance of Receiving Water Quality Objectives.	---	2 working days Oral or e-mail notice and 30 days written from time of becoming aware of the situation.
III.D.4.	Modify DAMP	---	90 days after approval by Exec. Officer
III.D.6.	Report discovery of exceedances from outside sources.	---	2 working days Oral or e-mail notice and 10 days written from time of becoming aware of the situation.
IV.A.	Revise existing Implementation Agreement.	6 Months	Nov. of the year following adoption.
IV.B.	Evaluate Urban Runoff Management structure and Implementation Agreement annually.	Annually on Nov. 30th	Annually on Nov. 30th
V.C.	Determine if Permittees have provided their staff authority to impose fines.	6 Months	Nov. of the year following adoption.
V.D.	Enact ordinances or other local regulatory mechanisms that include sanctions to ensure compliance	18 Months.	Nov. of the second year following adoption.
V.F.	Provide a report on the effectiveness of their Storm Water Ordinances and their enforcement, in prohibiting illegal discharges to the MS4s	12 Months	Nov. of the year following adoption.
V.G.	Legal Authority & Enforcement Strategy, Certification	18 months.	Nov. of the second year following adoption.
VI.A.	Eliminate or Permit illicit connections	60 days from receipt of notice.	Nov. of the year received notice.
VI.B.	Investigate Spills, Leaks, and/or illegal discharges.	Within 24 hours of receipt of notice.	Nov. of the year received notice.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
VI.D.	Evaluate available BMPs & recommend any improvements needed.	18 Months.	Nov. of the second year following adoption.
VI.E.	Litter/Trash Control Ordinance review	18 Months.	Nov. of the second year following adoption.
VII.B.	Develop mechanism to address septic system failures	12 Months.	Nov. of the year following adoption.
VII. C.	Review current oversight programs for portable toilets to determine the need for any revision	12 Months.	Nov. of the year following adoption.
VIII. A. 1	Establish a procedure to ensure local permits for proposed construction sites and industrial facilities are conditioned upon proof of obtaining coverage under the applicable General Storm Water Permit(s)/ San Jacinto Watershed Construction Activities Permit	6 months	Nov. of the year following adoption.
VIII. A.8	Review planning procedures and CEQA processes	12 Months	Nov. of the year following adoption.
VIII. A.9	Incorporate watershed protection principles and policies into the General Plan	26 Months	Nov. of the third year following adoption
VIII.A.10	Review and revise, as necessary, grading/erosion control ordinances to reduce erosion.	16 Months	Nov. of the second year following adoption.
VIII.A.11	Listing of BMPs for Construction	18 Months.	Nov. of the second year following adoption.
VIII.B.	Develop WQMP	20 Months.	Nov. of the third year following adoption.
VIII.B.4.	In the absence of an approved WQMP, the structural BMPs for all new development and significant redevelopment shall be sized to comply with one of the numeric sizing criteria given in Section VIII.B.5.	January 1, 2005	Nov. 30, 2005
VIII.B.6.b.(1).	Waiver and justification document submittal.	Within 30 days of issuance of waiver.	Nov. of year granted waiver.
IX.	Revise the E/CS	12 Months.	Nov. of the year following adoption.
IX.	Develop and update criteria in E/CS for inspection of Construction, Industrial and Commercial facilities, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.A.1.	Develop and update a construction site database, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.A.1.	Include Section VIII.B.1. criteria sites in database.	13 Months.	Nov. of the year following adoption.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
IX.A.2.	Inspect all inventoried construction sites	12 Months.	Nov. of the year following adoption.
IX.A.6.	Public agency staff and contract field operations staff adequately trained for Construction Sites inspections.	12 Months existing employees, 6 months new employees, and annually thereafter.	Annually on Nov. 30th
IX.A.7., IX.B.6., & IX.C.10.	Report Emergency Situations	---	24 hours Oral or e-mail notice and 10 days written from time of notice
IX.A.8., IX.B.7., & IX.C.11.	Report Non-Emergency Situations	---	2 working days Oral or e-mail notice and 10 days written from time of notice
IX.B.1.	Develop and update an industrial facilities database, including facility information, priority, and inspection information	18 Months and annually thereafter.	Nov. of the second year following adoption.
IX.B.12, & IX.C.15.	Public agency staff and contract field operations staff adequately trained for inspection of Industrial and Commercial Facilities.	18 Months existing employees, 6 months new employees, and annually thereafter.	Annually on Nov. 30th
IX.C.1.	Develop and update a commercial site database, including facility information, priority, and inspection information	18 Months.	Nov. of the third year following adoption.
IX.C.2.	Update the commercial site database to include additional categories of commercial facilities	24 Months.	Nov. of the third year following adoption.
IX.C.3.	Revise CAP and Develop restaurant inspections program, which includes runoff, grease blockage, and spill reduction aspects.	12 Months.	Nov. of the year following adoption.
X.A.	Submit Public Comments received in response to modifications to reports, plans, or schedules.	Annually	Annually on Nov. 30th
X.B.	Sponsor at least one Urban Runoff public outreach.	Annually	Annually on Nov. 30th
X. C.	Establish Public Education Committee	6 Months.	Nov. of the year following adoption.
X. D.	Determine the best method to provide educational and General Industrial Activities Storm Water Permit materials to businesses within their jurisdiction	18 months and begin implementation procedures within 24 months.	Nov. of the third year following adoption.
X.E.	Propose and implement a public awareness survey	24 months	Nov. 2007.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
X. F.	BMP guidance for restaurants, automotive service centers, and gasoline service stations, developed by Public Education Committee	12 Months	Nov. of the second year of adoption.
X.G.	Develop public education materials including reporting hot line and web site.	12 Months	Nov. 30, 2003
X. H	BMP guidance for control of potential polluting activities not otherwise regulated	18 Months.	Nov. of the year following adoption.
XI.B.	Develop BMPs for fire fighting training & equipment testing.	18 Months	Nov. of the year following adoption.
XI.C.	Review Municipal Facilities Strategy and evaluate its applicability to municipal maintenance contracts, contract for field maintenance operations, and leases	Annually on August 1st	Nov. 30th
XI. D	Evaluate criteria for inspection and maintenance of MS4s.	6 months and Annually thereafter	Annually on Nov. 30th
XI.E.	Review opportunities to configure/reconfigure MS4s	20 months.	Nov. of the third year following adoption.
XI.F.	Develop Model Public Facility Maintenance Program for activities and drainage facilities.	12 months.	Nov. of the third year following adoption.
XI.G.	Implement program to clean out MS4s	12 Months	Nov. of the second year following adoption.
XI.H.	Failsafe Clean out Open Channel MS4s and Retention/Detention Basins schedule	November 1, 2004	Nov. 2005
XI.J.	Develop and distribute BMP guidance for public agency and contract field operations and maintenance staff	18 months	Nov. of the year following adoption.
XI.K.	Training provided on fertilizer and pesticide management and other pollution control measures	Annually (Staff attend @ least 3 out of 5).	Annually on Nov. 30th
XI.L.	Identify areas that are not subject to street sweeping due to lack of continuous curb and gutter, and evaluate their potential for impacting Urban Runoff quality.	Nov. 2004	Nov. 2004
XI.M.	Evaluate street/road sweeping frequency	Annually	Annually on Nov. 30th
XI.O.	Status report on flood control facilities in the Chino-Corona agricultural preserve area.	Annually	Annually on Nov. 30th
XII.B.	Comply with the requirements for municipal construction projects that may result in land disturbance greater than one acre.	March 10, 2003	Nov. of the year following adoption.
XIII.A.	Revise the DAMP	6 months after WQMP approval or Jan. 1, 2005	Nov. 2005.
XIII.B.	Evaluate the DAMP for additional revision.	Annually on August 1st	Nov. 30th
XV.A.5	Unless otherwise specified complete changes to plans or programs in this Order.	12 Months	Nov. of the year following adoption.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
XV.B.	Annual Report/Fiscal Analysis	Annually	Nov. 30th
XVI.A.	Report of Waste Discharge	180 days before permit expires	April 27, 2007
Appendix 3 I.G.	Identify monitoring locations for interim monitoring.	6 Months	Nov. of the year following adoption.
Appendix 3 I.H, III.B. & III.C.	Revise CMP	12 Months	Nov. of the year following adoption.
Appendix 3. IV.B.	Summary, evaluation, and discussion of monitoring results and re-evaluate monitoring program priorities based on previous year's data	Annually, Nov.30th	Nov. 30th

Ordered by_____
Gerard J. Thibeault
Executive Officer
October 25, 2002